

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A method for treating plants in a body of soil, comprising:

contacting said plants in said body of soil with a composition comprising the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties chemically reacted sufficient to chemically transform said first compound and provide substantially any predetermined combination of water solution-stable macronutrients and/or micronutrients of substantially any concentration and/or concentrations.

Claim 2. (previously presented): The method of claim 1, wherein said composition further comprises: a plant promoting effective amount of solution-stable Ca.sup.++ moieties; a plant promoting effective amount of solution-stable S.sup.6+ moieties; a plant promoting effective amount of solution-stable Mg.sup.++ moieties; and, a plant promoting effective amount of solution-stable N.sup.3- moieties.

Claim 3. (previously presented): The method of claim 2, wherein said solution-stable moieties are a reaction product formed from the reaction of: a first reactant selected from the group consisting of Sulfamic acid, a water soluble Sulfamic acid derivative, an oil soluble Sulfamic acid derivative that can be reacted to provide a water solution-stable Sulfamate, and combinations thereof; and, a second micronutrient and/or macronutrient

moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

Claim 4. (previously presented): The method of claim 2, wherein the solution-stable moieties are formed by reacting effective amounts of: at least one member selected from the group consisting of: a powdered micronutrient metal, a powdered macronutrient metal, Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnatellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide),

Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis (tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound, selected from the group consisting of a compound of the formula (II): $\text{HSO}_3\text{NR}_4\text{R}_5$ (II) wherein:

R.sup.4 and R.sup.5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R.sup.4 or R.sup.5 is hydrogen; a compound of the formula (III): R.sup.1(NR.sup.2R.sup.3).sub.n.nHSO.sub.3NR.sup.4R.sup.5 (III) wherein: R.sup.1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R.sup.2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R.sup.3, R.sup.4 and R.sup.5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

Claim 5. (previously presented): The method according to claim 1, wherein said composition further comprises a plant promoting effective amount of water.

Claim 6. (cancelled)

Claim 7. (currently amended): A composition comprising:

the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties that have been chemically reacted in respective proportions sufficient to chemically transform said first compound and provide substantially any combination of water solution-stable macronutrients and/or micronutrients of substantially any predetermined concentration and/or predetermined concentrations.

Claim 13. (cancelled)

Claim 14. (currently amended): A method for treating living cells, comprising:

contacting said living cells with a composition comprising the product of a moderately water soluble first compound including a sulfamic moiety and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties chemically reacted in respective proportions sufficient to chemically transform said first compound and provide substantially any combination of water solution-stable macronutrients and/or micronutrients of substantially any predetermined concentration and/or predetermined concentrations.

Claim 15. (previously presented): The method of claim 14, wherein said composition further comprises: a cell-promoting effective amount of solution-stable Ca.sup.++ moieties; a cell-promoting effective amount of solution-stable S.sup.6+ moieties; a cell-promoting effective amount of solution-stable Mg.sup.++ moieties; and, a cell-promoting effective amount of solution-stable N.sup.3- moieties.

Claim 16. (previously presented): The method of claim 14, wherein said solution-stable moieties are a reaction product formed from the reaction of: a first reactant selected from the group consisting of Sulfamic acid, a water soluble Sulfamic acid derivative, an oil soluble Sulfamic acid derivative that can be reacted to provide a water solution-stable Sulfamate, and combinations thereof; and, a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

Claim 17 (previously presented): The method of claim 15, wherein the solution-stable moieties are formed by reacting effective amounts of: at least one member selected from the group consisting of: Dolomite, a powdered micronutrient metal, a powdered

macronutrient metal, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite (Hydrated Potassium Magnesium Carbonate), Brugnattellite (Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite (Potassium Calcium Carbonate), Calcite (Calcium Carbonate), Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite (Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite (Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite

(Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-1,6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper (II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel (II) carbonate hydroxide, Nickel (II) carbonate (anhydrous), Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and/or any combination thereof; and, at least one sulfamic compound, selected from the group consisting of: a compound of the formula (II): $\text{HSO}_2\text{NR}_4\text{R}_5$ (II) wherein: R_4 and R_5 are independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R_4 or R_5 is hydrogen; a compound of the formula (III): $\text{R}_1(\text{NR}_2\text{R}_3)_n\text{HSO}_2\text{NR}_4\text{R}_5$ (III) wherein: R_1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl, and aryl, R_2 is

selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl;
R.sup.3, R.sup.4 and R.sup.5 are hydrogen; and n is an integer from 1 to 3; and,
combinations thereof.

Claim 18. (previously presented): The method according to claim 14, wherein said
composition further comprises a cell-promoting effective amount of water.

Claim 19. (previously presented): The method according to claim 14, wherein said
composition is encapsulated.

Claim 20. (previously presented): The method according to claim 14, wherein said cells
are selected from the group consisting of living cells, animal cells, plant cells and
combinations thereof.

Claim 21. (currently amended): A process for forming a composition, comprising:

chemically reacting a moderately water soluble first compound including a
sulfamic moiety and a substantially water insoluble second compound including
macronutrient and/or micronutrient moieties at concentrations and under conditions
sufficient to chemically transform said first compound and provide a product of
substantially any predetermined combination of water solution-stable macronutrients
and/or micronutrients of substantially any concentration and/or concentrations.